






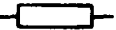






## Assignment 2

Textbook Assignment: "Oxygen Component Test Stand (1172AS100)." Pages 2-1 through 2-16.

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Learning Objective: Recognize the capabilities, operational characteristics and leakage within systems, and associated maintenance procedures for the 1172 AS 100 oxygen system component test stand.

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| <p>2-1. Who has the responsibility for maintaining the 1172 AS 100 test stand?</p> <ol style="list-style-type: none"> <li>1. Senior PR</li> <li>2. Ground support personnel</li> <li>3. Calibration lab team</li> </ol> <p>2-2. Which of the following test stands is used to test oxygen regulators?</p> <ol style="list-style-type: none"> <li>1. OTS 59A 120</li> <li>2. OTS 31-15</li> <li>3. 1172 AS 100</li> <li>4. 135562A</li> </ol> <p>2-3. Detailed instructions for periodic inspections for the 1172 AS 100 can be found in which of the following manuals?</p> <ol style="list-style-type: none"> <li>1. Aircrew Survival Equipmentman 3&amp;2 Vol 2</li> <li>2. NAVAIR 13-1-6.4</li> <li>3. Both 1 and 2 above</li> <li>4. NAVAIR 13-1-6.5</li> </ol> <p>2-4. How many different systems are incorporated within the 1172 AS 100 test stand?</p> <ol style="list-style-type: none"> <li>1. 5</li> <li>2. 7</li> <li>3. 9</li> <li>4. 12</li> </ol> | <p>2-5. Which of the following symbols identifies a one-way check valve?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>1. </p> <p>2. </p> </div> <div style="text-align: center;"> <p>3. </p> <p>4. </p> </div> </div> <p>2-6. Which of the following symbols identifies a line trap?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>1. </p> <p>2. </p> </div> <div style="text-align: center;"> <p>3. </p> <p>4. </p> </div> </div> <p>2-7. Which of the following symbols identifies a Vol-O-Flo element?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>1. </p> <p>2. </p> </div> <div style="text-align: center;"> <p>3. </p> <p>4. </p> </div> </div> <p>2-8. Before attempting to operate the 1172 AS 100 test stand, which of the following actions must you perform?</p> <ol style="list-style-type: none"> <li>1. Secure all the valves before opening the supply cylinder</li> <li>2. Position the high-pressure regulator to LOAD then turn to VENT</li> <li>3. Ensure the low-pressure regulator is bled out</li> <li>4. All of the above</li> </ol> |
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2-9. During which leakage test is supply nitrogen pressure tested for leakage?

1. Inward leakage
2. Outward leakage
3. Rotameter leakage
4. Differential leakage

2-10. How often do you perform the outward leakage test?

1. Daily
2. Biweekly
3. Weekly
4. Monthly

2-11. To test for leakage on the supply pressure gage, you should pressurize the gage and wait 2 minutes. How much leakage, if any, is allowed?

1. 5 psi
2. 10 psi
3. 15 psi
4. None

2-12. What is the minimum pressure range of the regulated high-pressure system?

1. 0 psig
2. 100 psig
3. 250 psig
4. 500 psig

2-13. The gage guard that protects the low-range and high-range leakage rotameters is set to relieve at what maximum pressure?

1.  $50 \pm 5$  psig
2.  $170 \pm 5$  psig
3.  $180 \pm 5$  psig
4.  $250 \pm 10$  psig

2-14. Which of the following gages indicates the gage guard pressure that protects the low-range and high-range rotameters?

1. Regulated low-pressure gage
2. Regulated high-pressure gage
3. Supply gage
4. Differential pressure gage

2-15. When testing the regulated high-pressure system, you determine that there is a leak in one of your ON/OFF valves. The leak will be indicated on which of the following gages?

1.  $N_2$  inlet pressure gage
2.  $N_2$  outlet pressure gage
3. Differential pressure gage

2-16. To bleed the regulated high-pressure system, you should use which of the following valves or regulators?

1. High-pressure regulator only
2. System bleed valve only
3. Both 1 and 2 above
4. Inlet bleed valve

2-17. To check the regulated high-pressure system for leaks, you should turn the supply cylinder ON. This pressure can be read on which of the following gages?

1. Low-pressure gage
2. High-pressure gage
3. Both 1 and 2 above
4. Differential pressure gage

2-18. When testing the high pressure system for leaks, what period of time must you wait before reading and rereading the high-pressure gage?

1. 1 min
2. 2 min
3. 3 min
4. 5 min

2-19. What is the minimum pressure range of the regulated low-pressure nitrogen system?

1. 0 to 180 psig
2. 0 to 250 psig
3. 0 to 500 psig
4. 0 to 1800 psig

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Learning Objective: Identify the test stand used to test LOX converters, test stand inspections, internal parts, and general maintenance.

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- 2-20. The purpose of the regulated low-pressure nitrogen system is to supply nitrogen to which of the following components?
1. N<sub>2</sub> input connection
  2. In-system leakage rotameters
  3. Both 1 and 2 above
  4. N<sub>2</sub> output connection
- 2-21. When you are testing the regulated low-pressure system for leaks, what action determines a leak is present?
1. The low-pressure gage drops
  2. The low-pressure gage rises
  3. The ball in the high-range leakage rotameter rises
  4. The ball in the low-range leakage rotameter rises
- 2-22. When the low-pressure regulator indicates 160 psig, what should the N<sub>2</sub> input pressure gage be reading?
1. 70 psig
  2. 120 + 5 psig
  3. 145 ± 5 psig
  4. 160 psig
- 2-23. When making bleed adjustments to a 20004 miniature regulator, You should use which of the following systems?
1. Input
  2. Rotameter
  3. output
  4. Regulated low-pressure
- 2-24. How many rotameters are incorporated in the rotameter system?
1. One
  2. Two
  3. Three
  4. Four
- 2-25. Which of the following types of leakage tests requires you to connect the low-pressure connection (19) and the 200 ccm leakage connection (20) together by using the line with two bayonet fittings?
1. Leakage between the low-pressure and rotameter system
  2. Leakage between the high-pressure and rotameter system
  3. Leakage through the leakage control valve (E)
  4. Leakage through the supply shut off valve
- 2-26. Which of the following connections is NOT located inside the pressure chamber?
1. Low-pressure connection
  2. 200-ccm leakage connection
  3. Reference tap connection
  4. Differential pressure connection
- 2-27. To pressurize the differential pressure system for a leakage test, you open the leakage control valve until it reaches how many inches of water on the pressure/suction manometer?
1. 5 in.
  2. 9 in.
  3. 12 in.
  4. 18 in.
- 2-28. Leakage in the differential pressure system will be indicated on which of the following gages?
1. Pressure/auction rotameter
  2. High-range leakage rotameter
  3. Low-pressure leakage rotameter
  4. All of the above
- 2-29. The differential pressure indicating system is used to perform which of the following tests?
1. Safety-pressure
  2. Pressure breathing
  3. Flow suction
  4. All of the above
- 2-30. How many manometers are used on the test stand to indicate differential pressure?
1. One
  2. Two
  3. Three
  4. Four
- 2-31. Which of the following valves or connections affect(s) readings on the pressure suction manometer?
1. Helmet reference tap
  2. Suit simulator reference tap
  3. Pressure equalizer valve
  4. All of the above

- 2-32. 1.0 psig is equal to how many inches of H<sub>2</sub>O?
1. 8.5
  2. 9.0
  3. 20.0
  4. 27.7
- 2-33. 1.0 psig is equal to how many inches of HG?
1. 5 in.
  2. 2 in.
  3. 3 in.
  4. 4 in.
- 2-34. To test the differential pressure indicating system, you must apply how many inches of H<sub>2</sub>O to the system?
1. 16 in.
  2. 18 in.
  3. 20 in.
  4. 24 in.
- 2-35. Pressure applied to the differential pressure system can be read on which of the following component?
1. Pressure/suction manometer
  2. High-pressure gage
  3. Low-pressure gage
  4. Inclined flowmeter
- 2-36. Leakage in the differential pressure system will be indicated on which of the following components?
1. High-range flowmeter
  2. Low-range flowmeter
  3. Both 1 and 2 above
  4. Pressure/suction manometer
- 2-37. How should you bleed the differential pressure system?
1. Back out on the low-pressure regulator and open the bleed valve
  2. Back out on the high-pressure regulator and open the bleed valve
  3. Turn in on the low-pressure regulator and open the bleed valve
  4. Turn in on the high-pressure regulator and open the bleed valve
- 2-38. Which of the following systems is considered the heart of the test stand?
1. Vacuum system
  2. Differential system
  3. Rotameter system
  4. Nitrogen system
- 2-39. Which of the following valves allows a direct evacuation of the chamber?
1. Cutput valve
  2. Vacuum control valve
  3. Bypass valve
- 2-40. Which of the following valves draws a flow through the item under test?
1. Output valve
  2. Vacuum valve
  3. Input valve
- 2-41. The vacuum system is checked at which of the following altitudes?
1. 5,000 feet
  2. 10,000 feet
  3. 20,000 feet
  4. 50,000 feet
- 2-42. Atmosphere, as a unit of pressure, is equal to what total number of pounds per square inch?
1. 6.9
  2. 12.5
  3. 14.69
  4. 27.0
- 2-43. At what altitude do you perform the leakage test of the altitude sensing system?
1. 10,000 feet
  2. 20,000 feet
  3. 50,000 feet
  4. 150,000 feet
- 2-44. To indicate a leak is present when testing the chamber bleed system for leaks, you will receive a drop in
1. supply pressure
  2. regulated low pressure
  3. regulated high pressure
  4. altitude

- 2-45. Which of the following systems is the largest and most important system in the operation of the 1172 AS 100 test stand?
1. Vacuum
  2. System bleed
  3. Flow measuring
  4. Differential pressure
- 2-46. Where does the output flow system originate?
1. Prizometer
  2. Flow selector valve
  3. Vol-O-Flow element
- 2-47. Output flow systems can be used only with the chamber at altitude.
1. True
  2. False
- 2-48. The input flow system originates at the
1. prizometer
  2. flow selector valve
  3. suit simulator
  4. air intake
- 2-49. Which of the following systems originates at either the vent ambient valve or the vent pressure valve?
1. Vent flow
  2. Differential pressure
  3. Vol-O-Flow
  4. Bleed
- 2-50. To use the flow measuring system, you must convert liters-per-minute to which of the following measurements?
1. In. H<sub>2</sub>O
  2. Psig
  3. In. Hg
- 2-51. At what altitude & you perform the leak test for the flow measuring system?
1. Sea level
  2. 5,000 feet
  3. 10,000 feet
  4. 15,000 feet